

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Thistlethwaite et al (5,402,240).

With regard to claims 1-4, Thistlethwaite et al teach of an apparatus in accordance with figures 2-4 comprising of a light source (11; figure 4) for emitting light of specific visible wavelength, a means to control the intensity of light (lamp regulator; figure 3a) from the light source (11; figure 4), a glass cuvette for holding the test sample though which the light is passed, a cuvette holder (22; figure 4) for holding the glass cuvette, a photodetector (16; figure 4) for detecting the light transmitted by the test sample, an amplifier (col 8; line 57), a means (line 52; col 16) to convert the output current signal from the photodetector to voltage, calibration circuitry enabling display on a display unit (4; figure 2) wherein the display unit displays at least 3 ½ digits (claim 3) and a power supply for supplying power to different components of the device. The recitation “measurement of gossypol concentration after color development” in claim 1 and “wherein the gossypol is selected from the group consisting of deoiled cake, cottonseed and cottonseed oil” of claim 2 has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the

preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Furthermore, examiner notes that a recitation of the intended use (gossypol concentration) (claims 3 and 4) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With regard to claim 1, Thistlethwaite lacks the teaching of the light emitting diode emitting a wavelength of 635nm. However, Thistlethwaite teaches of the light emitting diode emitting any wavelength in the visible range (col 10; lines 16-17) which encompasses the wavelength of 635 nm. Furthermore examiner notes that it is well known in art to use any of the well known diodes (including wavelength 635nm) available in the visible range depending on the desired results and/or what is being measured.

With regards to claims 1, 3-4, 7-8, 10, and 13-15, Thistlethwaite et al lacks the teaching of the light source being an LED of 5 mm having intensity of 125 mcd, view angle of 24.degree, peak wavelength of 635 nm , power dissipation of 50 mW, the display being in milligram/litre and parts per million (ppm), path length of the glass cuvette being 17 mm, a cuvette having a diameter of 17 mm, height of 5 cm and a capacity of 5ml, the photo detector BPW 21 having package of TO 5, effective area of detection of 5.9 mm diameter wavelength range of 460-750 nm and sensitivity of 7 nA/lux is used to detect the transmitted/absorbed light through the test solution, the amplifier is a log amplifier TL 441

IC, the calibration circuit being a 10K POT, the power supply being a 6-V battery for the log amplifier, photodetector and other integrated chips and a 9-V battery for the display unit.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to replace the broad teachings of the elements with the specifics since in all the cases, the specifics are commercially available functional equivalents of the teachings and since applicant has not disclosed that the use of the specifics solves any stated problem, has any specific benefit, or is for any particular purpose and it appears that the invention would perform equally well as a functional equivalent with the specifics of above.

With regard to claim 5, Thistlethwaite et al lacks the teaching of the means used to control the intensity of light from light source being a multturn potentiometer.

It would have been an obvious matter of design choice to use a multturn potentiometer to control the intensity of light, since applicant has not disclosed that use of potentiometers solves any stated problem, has any specific benefit, or is for any particular purpose and it appears that the invention would perform equally well as a functional equivalent with the potentiometer.

With regards to claim 6, Thistlethwaite et al lacks the teaching of the cuvette being made up from Borosil glass. At the time of the invention, it would have been obvious to one of ordinary skill in the art to make the cuvette using Borosil glass which is commercially available since applicant has not disclosed that the use of Borosil glass as opposed to using an other commercially available glass solves any stated problem, has any specific benefit, or is for any particular purpose and it appears that the invention would perform equally well as a functional equivalent with the Borosil glass.

With regards to claim 9, Thistlethwaite et al lacks the teaching of cuvette holder is made up from aluminum alloy, which is blackened.

Official Notice is taken that the use of blackened aluminum alloy to manufacture a cuvette holder is old and well known in the art. See *In Re Malcolm* 1942C.D.589:543 O.G.440. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use blackened aluminum alloy to manufacture the cuvette holder since it is well known in the art to blacken an object to minimize unwanted reflection of light off the object which would provide a more accurate measurement.

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice in the previous Office Action mailed 5/16/06. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made. *In re Selmi*, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); *In re Fischer*, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well known statement was made. The applicant has not presented a traversal in the Amendment filed 1/12/09, thus

the well-known statement is taken to be admitted prior art. See MPEP 2144.03, paragraphs 4 and 6.

With regards to claim 20, the apparatus is low cost, portable and rugged and measures gossypol in the range of  $\pm 2$  % error. Examiner notes that Thistlethwaite et al is silent of the range of the error but believes that it is an inherent part of the apparatus since the present invention does not have structural differences from the prior art.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-16 and 20 have been considered but are moot in view of the new ground(s) of rejection.

With regard to claim 1, applicant argues that the present claims include a light emitting diode as the light source wherein a wavelength is 635 nm whereas Thistlethwaite et al provide a light emitting diode with a wavelength of 660 nm. Examiner respectfully disagrees as shown in the rejection above. Thistlethwaite et al teaches that the wavelength of the diode can be of any visible wavelength (col 10, lines 16-17) and since a light emitting diode of wavelength 635 is well known in the art and that choosing the optimum wavelength

depending on what is being measured is also well known in the art, it would have been obvious to use a light emitting diode of wavelength 632 nm.

Applicant further argues that Thistlewaite specifically teaches away from using a log amplifier. Examiner respectfully disagrees. Thistlewaite teaches that a temperature compensated log amplifier is not needed but does not teach that log amplifier cannot be used. Thistlewaite teaches of using an amplifier and thus it would have been obvious to replace the amplifier with a well known log amplifier as shown in the rejection above.

### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda H Merlino whose telephone number is 571-272-2421. The examiner can normally be reached on Monday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley, Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amanda H Merlino /A. H. M./  
Patent Examiner  
Art Unit 2877  
March 23, 2010

/Gregory J. Toatley, Jr./  
Supervisory Patent Examiner,  
Art Unit 2877  
29 March 2010